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=> d his

(FILE 'HOME' ENTERED AT 18:41:03 ON 22 MAR 2004)

FILE 'MEDLINE, CAPLUS, BIOSIS, SCISEARCH' ENTERED AT 18:41:12 ON 22 MAR 2004

L1 389550 S SCHISTOSOM? OR TREMATODE OR NEMATODE OR PARASITE  
L2 790001 S (ELECTROPORAT? OR TRANSFORMAT? OR LIPOFECT? OR BALLISTIC OR B  
L3 817 S L1(6A)L2  
L4 254087 S TRANSGEN?  
L5 69 S L3 AND L4  
L6 45 DUP REM L5 (24 DUPLICATES REMOVED)

=> d au ti so 1-45 l6

L6 ANSWER 1 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
IN Verwaerde, Philippe; Bogaert, Thierry; Platteeuw, Christ; Cuvillier,  
Gwladys; Behgyn, Myriam; Feichtinger, Richard  
TI Pharmacological compound screening method using nematode worms  
SO U.S. Pat. Appl. Publ., 54 pp., Cont.-in-part of U.S. Ser. No. 550,107.  
CODEN: USXXCO

L6 ANSWER 2 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
IN Davis, Eric L.; Goellner, Melissa  
TI Tobacco endoglucanase gene promoters upregulated by nematodes and its use  
in regulation of insecticidal toxin expression in **transgenic**  
plants  
SO U.S. Pat. Appl. Publ., 32 pp.  
CODEN: USXXCO

L6 ANSWER 3 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
IN Davis, Eric L.; Goellner, Melissa  
TI Root-knot nematode responsive gene promoter of Arabidopsis thaliana gene  
cell  
SO U.S. Pat. Appl. Publ., 8 pp.  
CODEN: USXXCO

L6 ANSWER 4 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
IN Puzio, Piotr S.; Grundler, Florian M. W.  
TI Nematode-feeding structure specific gene (pyk20) from Arabidopsis thaliana  
and its application to produce nematode resistant plants  
SO U.S., 29 pp.  
CODEN: USXXAM

L6 ANSWER 5 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
AU Moreira, Luciano A.; Ito, Junitsu; Ghosh, Anil; Devenport, Martin; Zieler,  
Helge; Abraham, Eappen G.; Crisanti, Andrea; Nolan, Tony; Catteruccia,  
Flaminia; Jacobs-Lorena, Marcelo  
TI Bee Venom Phospholipase Inhibits Malaria Parasite Development in  
**Transgenic** Mosquitoes  
SO Journal of Biological Chemistry (2002), 277(43), 40839-40843  
CODEN: JBCHA3; ISSN: 0021-9258

L6 ANSWER 6 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
AU Lok, James B.; Massey, Holman C., Jr.  
TI **Transgene** expression in Strongyloides stercoralis following  
gonadal microinjection of DNA constructs  
SO Molecular and Biochemical Parasitology (2002), 119(2), 279-284  
CODEN: MBIPDP; ISSN: 0166-6851

L6 ANSWER 7 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
AU De Pomerai, David I.; David, Helen E.; Power, Rowena S.; Mutwakil,  
Mohammed H. A. Z.; Daniells, Clare  
TI **Transgenic** nematodes as biosensors of environmental stress

- SO Focus on Biotechnology (2002), 3A(Biotechnology for the Environment: Strategy and Fundamentals), 221-236  
CODEN: FBOIAM
- L6 ANSWER 8 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1  
AU Wipperfsteg, Volker; Kapp, Katja; Kunz, Werner; Jackstadt, W. Peter; Zahner, Horst; Grevelding, Christoph G.  
TI HSP70-controlled GFP expression in transiently transformed schistosomes  
SO Molecular and Biochemical Parasitology (2002), 120(1), 141-150  
CODEN: MBIPDP; ISSN: 0166-6851
- L6 ANSWER 9 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
IN Tobias, Christian; Shah, Gowri; Gutterson, Neal  
TI Methods of inhibiting plant parasitic nematodes and insect pests by expression of nematode and insect specific double-stranded RNA in plants  
SO PCT Int. Appl., 49 pp.  
CODEN: PIXXD2
- L6 ANSWER 10 OF 45 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN  
AU Garcia G (Reprint); Sciutto E; Fragoso G; Cruz-Revilla C; Toledo A; Villalobos N; Flores I; Aluja A; Jose M V; Larralde C  
TI Inhibitory role of antibodies in the development of Taenia solium and Taenia crassiceps toward reproductive and pathogenic stages  
SO JOURNAL OF PARASITOLOGY, (JUN 2001) Vol. 87, No. 3, pp. 582-586.  
Publisher: AMER SOC PARASITOLOGISTS, 810 EAST 10TH STREET, LAWRENCE, KS 66044 USA.  
ISSN: 0022-3395.
- L6 ANSWER 11 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
AU Bertioli, David J.; Guimaraes, Patricia M.; Jones, Jonathon D. G.; Thomas, Colwyn M.; Burrows, Paul R.; Monte, Damares C.; Leal-Bertioli, Soraya C. de M.  
TI Expression of tomato Cf genes and their corresponding avirulence genes in **transgenic** tobacco plants using nematode responsive promoters  
SO Annals of Applied Biology (2001), 138(3), 333-342  
CODEN: AABIAV; ISSN: 0003-4746
- L6 ANSWER 12 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
AU Urwin, Peter E.; Troth, Kevin M.; Zubko, Elena I.; Atkinson, Howard J.  
TI Effective **transgenic** resistance to Globodera pallida in potato field trials  
SO Molecular Breeding (2001), 8(1), 95-101  
CODEN: MOBRFL; ISSN: 1380-3743
- L6 ANSWER 13 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
IN Verwaerde, Philippe; Platteeuw, Christ; Cuvillier, Gwladys; Bogaert, Thierry  
TI Nematodes for screening of compounds with potential pharmacological activity  
SO PCT Int. Appl., 137 pp.  
CODEN: PIXXD2
- L6 ANSWER 14 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
IN Hamburger, Joseph; Laban, Avraham  
TI Use of **transgenic** parasites for introduction and expression of foreign genes in animals  
SO PCT Int. Appl., 90 pp.  
CODEN: PIXXD2
- L6 ANSWER 15 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
AU Oka, Yuji; Koltai, Hinanit; Bar-Eyal, Meira; Mor, Mishaël; Sharon, Edna; Chet, Ilan; Spiegel, Yitzhak  
TI New strategies for the control of plant-parasitic nematodes  
SO Pest Management Science (2000), 56(11), 983-988

CODEN: PMSCFC; ISSN: 1526-498X

- L6 ANSWER 16 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
AU Plovie, E.; Goeleven, E.; Tanghe, M.; Gheysen, G.  
TI Functional analysis of nematode induced plant genes through antisense and co-suppression  
SO Mededelingen - Faculteit Landbouwkundige en Toegepaste Biologische Wetenschappen (Universiteit Gent) (2000), 65(2b), 551-556  
CODEN: MFLBER; ISSN: 1373-7503
- L6 ANSWER 17 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
AU Urwin, Peter E.; Levesley, Aurora; McPherson, Michael J.; Atkinson, Howard J.  
TI **Transgenic** resistance to the nematode *Rotylenchulus reniformis* conferred by *Arabidopsis thaliana* plants expressing proteinase inhibitors  
SO Molecular Breeding (2000), 6(3), 257-264  
CODEN: MOBRFL; ISSN: 1380-3743
- L6 ANSWER 18 OF 45 MEDLINE on STN DUPLICATE 2  
AU de Koning-Ward T F; Fidock D A; Thathy V; Menard R; van Spaendonk R M; Waters A P; Janse C J  
TI The selectable marker human dihydrofolate reductase enables sequential genetic manipulation of the *Plasmodium berghei* genome.  
SO Molecular and biochemical parasitology, (2000 Mar 5) 106 (2) 199-212.  
Journal code: 8006324. ISSN: 0166-6851.
- L6 ANSWER 19 OF 45 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 3  
AU Ignacimuthu, S. [Reprint author]; Arockiasamy, S.; Terada, R.  
TI Genetic transformation of rice: Current status and future prospects.  
SO Current Science (Bangalore), (25 July, 2000) Vol. 79, No. 2, pp. 186-195. print.  
CODEN: CUSCAM. ISSN: 0011-3891.
- L6 ANSWER 20 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
AU Brants, Aigars  
TI Transformation of tobacco and tomato with a fungal endochitinase gene and assays for resistance to nematodes and fungi  
SO (1999) 331 pp. Avail.: UMI, Order No. DA9923780  
From: Diss. Abstr. Int., B 1999, 60(3), 897
- L6 ANSWER 21 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
IN Nan, Guo-ling; Nagai, Chifumi  
TI Compositions and methods for genetic transformation of pineapple  
SO PCT Int. Appl., 87 pp.  
CODEN: PIXXD2
- L6 ANSWER 22 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
IN Barthels, Nathalie; Karimi Dehkor Di, Mansour; Gheysen, Godelieve  
TI Recombinant **nematode**-responsive promoters, their DNA sequences, **transformation** vectors containing the sequences, and uses thereof  
SO PCT Int. Appl., 51 pp.  
CODEN: PIXXD2
- L6 ANSWER 23 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
IN Hart, Anne C.; Faber, Peter; MacDonald, Marcy  
TI **Transgenic** nematode model of triplet repeat neurological diseases such as Huntington's disease  
SO PCT Int. Appl., 40 pp.  
CODEN: PIXXD2
- L6 ANSWER 24 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
IN Firoozabady, Ebrahim; Gutterson, Neal  
TI Genetic transformation of pineapple plant tissue with T-DNA containing

- genes conferring drought, insect, nematode and disease resistance, and use of transformed tissue for regeneration of pineapple plant  
SO U.S., 14 pp.  
CODEN: USXXAM
- L6 ANSWER 25 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
AU Karimi, M.; Porceddu, A.; Mironov, V.; Van Montagu, M.; Inze, D.; Gheysen, G.  
TI ARM1: application for engineered resistance to plant-parasitic nematodes  
SO Mededelingen - Faculteit Landbouwkundige en Toegepaste Biologische Wetenschappen (Universiteit Gent) (1999), 64(5b), 439-442  
CODEN: MFLBER; ISSN: 1373-7503
- L6 ANSWER 26 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
AU Lilley, C. J.; Devlin, P.; Urwin, P. E.; Atkinson, H. J.  
TI Parasitic nematodes, proteinases and **transgenic** plants  
SO Parasitology Today (1999), 15(10), 414-417  
CODEN: PATOE2; ISSN: 0169-4758
- L6 ANSWER 27 OF 45 MEDLINE on STN DUPLICATE 4  
AU Britton C; Redmond D L; Knox D P; McKerrow J H; Barry J D  
TI Identification of promoter elements of parasite nematode genes in **transgenic** *Caenorhabditis elegans*.  
SO Molecular and biochemical parasitology, (1999 Oct 15) 103 (2) 171-81.  
Journal code: 8006324. ISSN: 0166-6851.
- L6 ANSWER 28 OF 45 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN  
AU Wilson M (Reprint); Xin W M; Hashmi S; Gaugler R  
TI Risk assessment and fitness of a **transgenic** entomopathogenic nematode  
SO BIOLOGICAL CONTROL, (MAY 1999) Vol. 15, No. 1, pp. 81-87.  
Publisher: ACADEMIC PRESS INC, 525 B ST, STE 1900, SAN DIEGO, CA 92101-4495.  
ISSN: 1049-9644.
- L6 ANSWER 29 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
AU Urwin, Peter E.; McPherson, Michael J.; Atkinson, Howard J.  
TI Enhanced **transgenic** plant resistance to nematodes by dual proteinase inhibitor constructs  
SO Planta (1998), 204(4), 472-479  
CODEN: PLANAB; ISSN: 0032-0935
- L6 ANSWER 30 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
AU Williamson, Valerie M.  
TI Root-knot nematode resistance genes in tomato and their potential for future use  
SO Annual Review of Phytopathology (1998), 36, 277-293  
CODEN: APPYAG; ISSN: 0066-4286
- L6 ANSWER 31 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 5  
AU Hashmi, Sarwar; Hashmi, Ghazala; Glazer, Itamar; Gaugler, Randy  
TI Thermal response of *Heterorhabditis bacteriophora* transformed with the *Caenorhabditis elegans* hsp70 encoding gene  
SO Journal of Experimental Zoology (1998), 281(3), 164-170  
CODEN: JEZAO; ISSN: 0022-104X
- L6 ANSWER 32 OF 45 MEDLINE on STN DUPLICATE 6  
AU Qin L; Smant G; Stokkermans J; Bakker J; Schots A; Helder J  
TI Cloning of a trans-spliced glyceraldehyde-3-phosphate-dehydrogenase gene from the potato cyst nematode *Globodera rostochiensis* and expression of its putative promoter region in *Caenorhabditis elegans*.  
SO Molecular and biochemical parasitology, (1998 Oct 30) 96 (1-2) 59-67.  
Journal code: 8006324. ISSN: 0166-6851.

L6 ANSWER 33 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
 IN Ohl, Stephan Andreas; Sijmons, Peter Christiaan; Van Der Lee, Frederique  
 Marianne; Goddijn, Oscar Johannes Maria; Klap, Joke  
 TI A root-knot and root-cyst nematode-inducible promoter of Arabidopsis and  
 its use  
 SO PCT Int. Appl., 50 pp.  
 CODEN: PIXXD2

L6 ANSWER 34 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
 AU Stiekema, Willem J.; Bosch, Dirk; Wilmink, Annemiek; De Boer, Jan M.;  
 Schouten, Alexander; Roosien, Jan; Goverse, Aska; Smant, Gert;  
 Stokkermans, Jack; Gommers, Fred J.; Schots, Arjen; Bakker, Jaap  
 TI Towards pl antibody-mediated resistance against nematodes  
 SO Developments in Plant Pathology (1997), 10(Cellular and Molecular Aspects  
 of Plant-Nematode Interactions), 262-271  
 CODEN: DPPAEF

L6 ANSWER 35 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
 AU Waters, A. P.; Thomas, A. W.; Van Dijk, M. R.; Janse, C. J.  
 TI Transfection of malaria parasites  
 SO Methods (Orlando, Florida) (1997), 13(2), 134-147  
 CODEN: MTHDE9; ISSN: 1046-2023

L6 ANSWER 36 OF 45 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
 DUPLICATE 7  
 AU Waters, A. P.; Van Dijk, M. R.; Ramesar, J.; Janse, C. J.  
 TI Stable transfection of the blood stages of malarial parasites.  
 SO Annals of Tropical Medicine and Parasitology, (1997) Vol. 91, No. SUPPL.  
 1, pp. S63-S67.  
 CODEN: ATMPA2. ISSN: 0003-4983.

L6 ANSWER 37 OF 45 MEDLINE on STN DUPLICATE 8  
 AU Donald R G; Roos D S  
 TI Insertional mutagenesis and marker rescue in a protozoan parasite: cloning  
 of the uracil phosphoribosyltransferase locus from Toxoplasma gondii.  
 SO Proceedings of the National Academy of Sciences of the United States of  
 America, (1995 Jun 6) 92 (12) 5749-53.  
 Journal code: 7505876. ISSN: 0027-8424.

L6 ANSWER 38 OF 45 MEDLINE on STN DUPLICATE 9  
 AU Hashmi S; Hashmi G; Gaugler R  
 TI Genetic **transformation** of an entomopathogenic **nematode**  
 by microinjection.  
 SO Journal of invertebrate pathology, (1995 Nov) 66 (3) 293-6.  
 Journal code: 0014067. ISSN: 0022-2011.

L6 ANSWER 39 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
 AU Karimi, M.; Barthels, N.; Van Montagu, M.; Gheysen, G.  
 TI Identification of root knot nematode-induced genes in Arabidopsis thaliana  
 SO Mededelingen - Faculteit Landbouwkundige en Toegepaste Biologische  
 Wetenschappen (Universiteit Gent) (1994), 59(2b), 751-6  
 CODEN: MFLBER

L6 ANSWER 40 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
 IN Sijmons, Peter Christiaan; Goddijn, Oscar Johannes Maria; Van Den Elzen,  
 Peter J. M.; Van Der Lee, Frederique Marianne  
 TI **Transgenic** plants with reduced susceptibility to plant-parasitic  
 nematodes  
 SO PCT Int. Appl., 95 pp.  
 CODEN: PIXXD2

L6 ANSWER 41 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
 IN Hoge, Johan Herman Carolus; Goddijn, Oscar Johannes Maria; Schilperoort,  
 Robbert Adriaan

TI Tryptophan analogues as selective agents in the transformation of plants  
and plant cells

SO PCT Int. Appl., 49 pp.  
CODEN: PIXXD2

L6 ANSWER 42 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN

AU Broverman, Sherryl; MacMorris, Margaret; Blumenthal, Thomas

TI Alteration of Caenorhabditis elegans gene expression by targeted  
transformation

SO Proceedings of the National Academy of Sciences of the United States of  
America (1993), 90(10), 4359-63  
CODEN: PNASA6; ISSN: 0027-8424

L6 ANSWER 43 OF 45 MEDLINE on STN DUPLICATE 10

AU Lincke C R; Broeks A; The I; Plasterk R H; Borst P

TI The expression of two P-glycoprotein (pgp) genes in **transgenic**  
Caenorhabditis elegans is confined to intestinal cells.

SO EMBO journal, (1993 Apr) 12 (4) 1615-20.  
Journal code: 8208664. ISSN: 0261-4189.

L6 ANSWER 44 OF 45 MEDLINE on STN DUPLICATE 11

AU Stringham E G; Dixon D K; Jones D; Candido E P

TI Temporal and spatial expression patterns of the small heat shock (hsp16)  
genes in **transgenic** Caenorhabditis elegans.

SO Molecular biology of the cell, (1992 Feb) 3 (2) 221-33.  
Journal code: 9201390. ISSN: 1059-1524.

L6 ANSWER 45 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN

AU Fire, Andrew; Waterston, Robert H.

TI Proper expression of myosin genes in **transgenic** nematodes

SO EMBO Journal (1989), 8(11), 3419-28  
CODEN: EMJODG; ISSN: 0261-4189

=> d bib ab 33-45 l6

L6 ANSWER 33 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1998:1586 CAPLUS

DN 128:73056

TI A root-knot and root-cyst nematode-inducible promoter of Arabidopsis and  
its use

IN Ohl, Stephan Andreas; Sijmons, Peter Christiaan; Van Der Lee, Frederique  
Marianne; Goddijn, Oscar Johannes Maria; Klap, Joke

PA Mogen International N.V., Neth.; Ohl, Stephan Andreas; Sijmons, Peter  
Christiaan; Van Der Lee, Frederique Marianne; Goddijn, Oscar Johannes  
Maria; Klap, Joke

SO PCT Int. Appl., 50 pp.  
CODEN: PIXXD2

DT Patent  
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9746692	A1	19971211	WO 1996-EP2437	19960604
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	EP 748873	A1	19961218	EP 1995-201563	19950613
	R: NL				
	AU 9662222	A1	19980105	AU 1996-62222	19960604

AU 707563	B2	19990715		
EP 904387	A1	19990331	EP 1996-920791	19960604
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
BR 9612635	A	19990914	BR 1996-12635	19960604
JP 2000511427	T2	20000905	JP 1998-500116	19960604
RU 2198219	C2	20030210	RU 1999-100083	19960604
ZA 9604958	A	19970129	ZA 1996-4958	19960611
TW 457297	B	20011001	TW 1996-85110414	19960827
US 6262344	B1	20010717	US 1999-117927	19990426
PRAI EP 1995-201563	A	19950613		
WO 1996-EP2437	W	19960604		

AB A promoter of *Arabidopsis thaliana* that is induced upon infestation by root-knot or root-cyst nematodes is cloned and characterized for use in the development of nematode-inducible expression constructs, i.e. in the development of nematode-resistant plants. These promoters are preferably only expressed within nematode feeding structures and expression constructs including elements that prevent expression outside the feeding structure are preferred. One example is to express the Barnase gene from the nematode-inducible promoter and to express the gene for the cognate inhibitor (Barstar) from a promoter functional in non-infected tissue. The promoters was identified using a promoterless binary vector carrying a  $\beta$ -glucuronidase gene as reporter. A population of *Arabidopsis* seed transformed with a gene bank in this vector and screened for induction of the reporter upon nematode infestation. The promoter fragment was cloned from this bank by PCR using vector-derived primers and a longer genomic clone identified.

L6 ANSWER 34 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1998:97114 CAPLUS  
 DN 128:190533  
 TI Towards pl antibody-mediated resistance against nematodes  
 AU Stiekema, Willem J.; Bosch, Dirk; Wilmink, Annemiek; De Boer, Jan M.; Schouten, Alexander; Roosien, Jan; Goverse, Aska; Smant, Gert; Stokkermans, Jack; Gommers, Fred J.; Schots, Arjen; Bakker, Jaap  
 CS Department of Molecular Biology, DLO-Centre for Plant Breeding and Reproduction Research (CPRO-DLO), Wageningen, 6700 AA, Neth.  
 SO Developments in Plant Pathology (1997), 10(Cellular and Molecular Aspects of Plant-Nematode Interactions), 262-271  
 CODEN: DPPAEF  
 PB Kluwer Academic Publishers  
 DT Journal  
 LA English

AB The lack of available resistance genes severely hampers the introduction of durable disease resistance in plants. The feasibility to obtain resistance by the expression in plants of monoclonal antibodies. The rational behind this idea is that by binding to its antigen a monoclonal antibody is capable to inactivate the biol. activity of that antigen. As a model system we have chosen the interaction between potato and potato cyst nematodes while saliva proteins of nematodes served as antigen. These proteins are thought to play an important role in this interaction. Inhibition of the biol. activity of these proteins might interrupt the interaction which results in resistance. The isolation of genes coding for antibodies is facilitated by the application of the polymerase chain reaction (PCR). A small set of primers was designed which allowed the amplification of such genes. Subsequently genes which coded for full-length heavy and light chains of an antibody against nematodal saliva proteins were isolated and transferred to potato. Also genes encoding single-chain antibodies against the same antigen were constructed and transferred to potato. Anal. of **transgenic** potato plants showed that high level expression of such antibodies in roots is conceivable. These data will be discussed in the light of the introduction of nematode resistance in potato.

RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L6 ANSWER 35 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1997:801117 CAPLUS  
 DN 128:124229  
 TI Transfection of malaria parasites  
 AU Waters, A. P.; Thomas, A. W.; Van Dijk, M. R.; Janse, C. J.  
 CS Department of Parasitology, University of Leiden, Leiden, 2300 RC, Neth.  
 SO Methods (Orlando, Florida) (1997), 13(2), 134-147  
 CODEN: MTHDE9; ISSN: 1046-2023  
 PB Academic Press  
 DT Journal  
 LA English  
 AB The stable genetic transformation of three phylogenetically diverse species of Plasmodium, the parasitic etiol. agent of malaria, is now possible. The parasite is haploid throughout the vast majority of its life cycle. Therefore with the single selectable marker activity and protocols currently available, it is possible not only to express introduced **transgenes** but also to study the effects of site-specific homologous recombination such as gene knockout. **Transgene** expression will allow the detailed study of many aspects of the cellular biol. of malaria parasites, for example, the mechanisms underlying drug resistance and protein trafficking. We describe here the methods for propagation of the two animal models (Plasmodium berghei and Plasmodium knowlesi) and for transfection of these two species and the human parasite, Plasmodium falciparum. Examples of **transgene** expression are given.
- L6 ANSWER 36 OF 45 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
 DUPLICATE 7  
 AN 1997:254755 BIOSIS  
 DN PREV199799553958  
 TI Stable transfection of the blood stages of malarial parasites.  
 AU Waters, A. P.; Van Dijk, M. R.; Ramesar, J.; Janse, C. J.  
 CS Dep. Parasitol., Univ. Leiden, Postbus 9605, 2300 RC Leiden, Netherlands  
 SO Annals of Tropical Medicine and Parasitology, (1997) Vol. 91, No. SUPPL. 1, pp. S63-S67.  
 CODEN: ATMPA2. ISSN: 0003-4983.  
 DT Article  
 LA English  
 ED Entered STN: 13 Jun 1997  
 Last Updated on STN: 13 Jun 1997  
 AB Genetic manipulation of malarial parasites is not only essential if the complex biology of this group of pathogens is to be understood but also has implications for both vaccine and drug development. The stable, drug selectable, genetic transformation of the clinically relevant, intra-erythrocytic stages of a malarial parasite has been achieved. This was possible using a plasmid transfection vector carrying the gene locus encoding a drug-resistant form of the bifunctional enzyme dihydrofolate reductase-thymidylate synthase (DHFR/TS) from the rodent parasite, Plasmodium berghei. Derivatives of this vector were introduced into merozoites of P. berghei by **electroporation** and **parasites** selected for successful **transformation** in the rodent host on the basis of resistance to pyrimethamine. In five, separate experiments, drug-resistant parasite populations containing the transfection vector were obtained (T1-T5). Genetic analysis of resistant parental populations and clones demonstrated that the appropriate plasmids could be found in a circular, unrearranged form that replicated episomally to an observed maximum copy number of 15 copies/cell. The plasmids were not evenly distributed in the population. The DHFR/TS gene on the plasmid was expressed in a dose-dependent manner in the transfected parasites, indicating that the parasite is capable of supporting expression of multiple copies of genes normally present as a single copy. This last point has implications for the use of promoters of gene transcription from



the parasite, in the future, for the construction of **transgenic** parasites.

L6 ANSWER 37 OF 45 MEDLINE on STN DUPLICATE 8  
AN 95296389 MEDLINE  
DN PubMed ID: 7777580  
TI Insertional mutagenesis and marker rescue in a protozoan parasite: cloning of the uracil phosphoribosyltransferase locus from *Toxoplasma gondii*.  
AU Donald R G; Roos D S  
CS Department of Biology, University of Pennsylvania, Philadelphia 19104, USA.  
NC AI-28724 (NIAID)  
AI-31808 (NIAID)  
SO Proceedings of the National Academy of Sciences of the United States of America, (1995 Jun 6) 92 (12) 5749-53.  
Journal code: 7505876. ISSN: 0027-8424.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
OS GENBANK-L07793; GENBANK-S57516; GENBANK-U10246; GENBANK-Z14695; PIR-P18562; PIR-P25532  
EM 199507  
ED Entered STN: 19950720  
Last Updated on STN: 19950720  
Entered Medline: 19950712  
AB Nonhomologous integration vectors have been used to demonstrate the feasibility of insertional mutagenesis in haploid tachyzoites of the protozoan parasite *Toxoplasma gondii*. Mutant clones resistant to 5-fluorouracil were identified at a frequency of approximately  $10^{-6}$  (approximately  $2 \times 10^{-5}$  of the stable transformants). Four independent mutants were isolated, all of which were shown to lack uracil phosphoribosyl-transferase (UPRT) activity and harbor **transgenes** integrated at closely linked loci, suggesting inactivation of the UPRT-encoding gene. Genomic DNA flanking the insertion point (along with the integrated vector) was readily recovered by bacterial transformation with restriction-digested, self-ligated total genomic DNA. Screening of genomic libraries with the recovered fragment identified sequences exhibiting high homology to known UPRT-encoding genes from other species, and cDNA clones were isolated that contain a single open reading frame predicted to encode the 244-amino acid enzyme. Homologous recombination vectors were exploited to create genetic knock-outs at the UPRT locus, which are deficient in enzyme activity but can be complemented by transient transformation with wild-type sequences--formally confirming identification of the functional UPRT gene. Mapping of **transgene** insertion points indicates that multiple independent mutants arose from integration at distinct sites within the UPRT gene, suggesting that nonhomologous integration is sufficiently random to permit tagging of the entire **parasite** genome in a single **transformation**.

L6 ANSWER 38 OF 45 MEDLINE on STN DUPLICATE 9  
AN 96072458 MEDLINE  
DN PubMed ID: 8568284  
TI Genetic **transformation** of an entomopathogenic **nematode** by microinjection.  
AU Hashmi S; Hashmi G; Gaugler R  
CS Department of Entomology, Rutgers University, New Brunswick, New Jersey 08903, USA.  
SO Journal of invertebrate pathology, (1995 Nov) 66 (3) 293-6.  
Journal code: 0014067. ISSN: 0022-2011.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals

EM 199603  
ED Entered STN: 19960315  
Last Updated on STN: 19990129  
Entered Medline: 19960301  
AB We report the first successful **transformation** of an entomopathogenic **nematode**. Foreign genes were introduced in *Heterorhabditis bacteriophora* HP88 by microinjection using vectors carrying the *Caenorhabditis elegans* genes coding for the roller phenotype and 16-kDa heat shock protein (hsp16) gene. A translational fusion made by inserting lacZ in frame into hsp16 was expressed in the body musculature, hypodermis, and pharyngeal muscles. The transcription of the hsp16/lacZ **transgenes** resulted in the rapid synthesis of detectable levels of beta-galactosidase. This research opens new avenues for genetic modification of entomopathogenic nematodes.

L6 ANSWER 39 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1995:452681 CAPLUS  
DN 122:310953  
TI Identification of root knot nematode-induced genes in *Arabidopsis thaliana*  
AU Karimi, M.; Barthels, N.; Van Montagu, M.; Gheysen, G.  
CS Faculteit Wetenschappen, Universiteit Gent, Ghent, B-9000, Belg.  
SO Mededelingen - Faculteit Landbouwkundige en Toegepaste Biologische Wetenschappen (Universiteit Gent) (1994), 59(2b), 751-6  
CODEN: MFLBER  
PB Universiteit Gent, Faculteit Landbouwkundige en Toegepaste Biologische Wetenschappen  
DT Journal  
LA English  
AB Root knot nematodes are the most destructive pest among plant-parasitic nematodes with nearly a world-wide distribution. So far, root knot nematode infection is controlled by crop rotation, pesticides, biol. control, or by using resistant cultivars. Recently, mol. anal. of nematode/plant interactions have been started. Results from these studies can be used for genetic engineering of root knot nematode resistance in plants. One approach is to identify genes that are induced by nematode infection by using a promoter-tagging strategy. Therefore, an *Agrobacterium tumefaciens* strain harboring a  $\beta$ -glucuronidase (gus) fusion vector has been used for transformation of *Arabidopsis thaliana*. Regenerated transformants contain the T-DNA inserted into different plant loci. The promoterless gus gene can be activated by a flanking plant promoter. Activation of the reporter gene upon nematode infection indicates that a nematode-inducible gene is tagged. A thousand **transgenic** *Arabidopsis* plants have already been regenerated and a part of them has been screened for gus expression after root knot nematode infection.

L6 ANSWER 40 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1993:464908 CAPLUS  
DN 119:64908  
TI **Transgenic** plants with reduced susceptibility to plant-parasitic nematodes  
IN Sijmons, Peter Christiaan; Goddijn, Oscar Johannes Maria; Van Den Elzen, Peter J. M.; Van Der Lee, Frederique Marianne  
PA Mogen International N. V., Neth.  
SO PCT Int. Appl., 95 pp.  
CODEN: PIXXD2

DT Patent  
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9310251	A1	19930527	WO 1992-EP2559	19921102
	W:	AU, BB, BG, BR, CA, CS, FI, HU, JP, KP, KR, LK, MG, MN, MW, NO, PL, RO, RU, SD, UA, US			

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE, BF,  
BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG

AU 9229284 A1 19930615 AU 1992-29284 19921102  
JP 07500970 T2 19950202 JP 1992-508939 19921102  
EP 668921 A1 19950830 EP 1992-923499 19921102

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE

HU 70264 A2 19950928 HU 1994-1451 19921102

HU 218897 B 20001228

RU 2143000 C1 19991220 RU 1994-33345 19921102

US 5866777 A 19990202 US 1994-244122 19940519

PRAI EP 1991-203041 A 19911120

EP 1992-200046 A 19920110

WO 1992-EP2559 A 19921102

AB Plants with reduced susceptibility to **nematodes** are constructed by **transformation** with DNA comprising (1) a gene A (e.g. barnase gene) under the control of promoter A which upon expression causes disruption of a plant structure upon which the nematode feeds, and (2) a gene B (e.g. barstar gene) which upon expression neutralizes the disruptive effect of gene A. Gene B is under the control of a promoter that drives expression in all of the plant's cells (except in the nematode-feeding structure) where gene A is expressed. Binary vectors for plant transformation were constructed including vectors that contain candidate promoters B upstream of GUS gene (a reporter gene), barstar gene under the control of promoters A (e.g. rolD gene promoter), barnase gene under the control of promoters B (e.g. rolC gene promoter), and antisense enzyme (e.g. NADPH-cytochrome P 450 reductase) genes under the control of promoters A.

L6 ANSWER 41 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:249311 CAPLUS

DN 118:249311

TI Tryptophan analogues as selective agents in the transformation of plants and plant cells

IN Hoge, Johan Herman Carolus; Goddijn, Oscar Johannes Maria; Schilperoort, Robbert Adriaan

PA Mogen International N. V., Neth.

SO PCT Int. Appl., 49 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9306220	A1	19930401	WO 1992-EP2175	19920918

W: AU, JP, US

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE

AU 9225709 A1 19930427 AU 1992-25709 19920918

PRAI EP 1991-202458 19910920

WO 1992-EP2175 19920918

AB A method for selection of plant cells comprises use of a gene encoding a Trp analog-converting activity such as Trp decarboxylase and a Trp analog which prevents or inhibits growth of plant cells not expressing the gene for the enzyme. Thus, the Trp decarboxylase gene tdc of Catharanthus roseus was cloned and sequenced. Nicotiana tabacum cell transformants were identified using the tdc gene fused to the cauliflower mosaic virus 35S promoter as selective marker and 4-Me tryptophan as selective agent.

L6 ANSWER 42 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:421627 CAPLUS

DN 119:21627

TI Alteration of Caenorhabditis elegans gene expression by targeted transformation

AU Broverman, Sherryll; MacMorris, Margaret; Blumenthal, Thomas

CS Dep. Biol., Indiana Univ., Bloomington, IN, 47405, USA

SO Proceedings of the National Academy of Sciences of the United States of America (1993), 90(10), 4359-63  
CODEN: PNASA6; ISSN: 0027-8424

DT Journal

LA English

AB Strains of *C. elegans* were produced carrying a synthetic fusion of parts of 2 vitellogenin genes, vit-2 and vit-6, integrated into the genome. In most of the 63 transformant strains, the plasmid sequences are integrated at random locations in the genome. However, in 2 strains the **transgene** integrated by homologous recombination into the endogenous vit-2 gene. In both cases the reciprocal exchange between the chromosome and the injected circular plasmid containing a promoter deletion led to switching of the plasmid-borne promoter and the endogenous promoter, with a reduction in vit-2 expression. Thus, transforming DNA in nematodes can integrate by homologous recombination to result in partial inactivation of the chromosomal locus. The simplicity of the event and its reasonably high frequency suggest that gene targeting by homologous recombination should be considered as a method for directed inactivation of *C. elegans* genes.

L6 ANSWER 43 OF 45 MEDLINE on STN DUPLICATE 10

AN 93223702 MEDLINE

DN PubMed ID: 8096815

TI The expression of two P-glycoprotein (pgp) genes in **transgenic** *Caenorhabditis elegans* is confined to intestinal cells.

AU Lincke C R; Broeks A; The I; Plasterk R H; Borst P

CS Laboratory of Biochemistry, University of Amsterdam, The Netherlands.

SO EMBO journal, (1993 Apr) 12 (4) 1615-20.  
Journal code: 8208664. ISSN: 0261-4189.

CY ENGLAND: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199305

ED Entered STN: 19930521  
Last Updated on STN: 19950206  
Entered Medline: 19930513

AB P-glycoproteins can cause multidrug resistance in mammalian tumor cells by active extrusion of cytotoxic drugs. The natural function of these evolutionarily conserved, membrane-bound ATP binding transport proteins is unknown. In mammals, P-glycoproteins are abundantly present in organs associated with the digestive tract. We have studied the tissue-specific expression of *Caenorhabditis elegans* P-glycoprotein genes *pgp-1* and *pgp-3* by **transformation** of **nematodes** with *pgp-lacZ* gene fusion constructs in which the promoter area of the *pgp* genes was fused to the coding region of *lacZ*. Expression of *pgp-1* and *pgp-3*, as inferred from *pgp-lacZ transgenic* nematodes, was confined to the intestinal cells. The expression patterns of both genes were virtually indistinguishable. Quantitative analysis of *pgp* mRNA levels during development showed that *pgp-1*, -2, and -3 were expressed throughout the life cycle of *C.elegans*, albeit with some variation indicating developmental regulation. The expression of P-glycoprotein genes in intestinal cells is an evolutionarily conserved feature of these genes, consistent with the hypothesis that P-glycoproteins provide a mechanism of protection against environmental toxins.

L6 ANSWER 44 OF 45 MEDLINE on STN DUPLICATE 11

AN 92199352 MEDLINE

DN PubMed ID: 1550963

TI Temporal and spatial expression patterns of the small heat shock (*hsp16*) genes in **transgenic** *Caenorhabditis elegans*.

AU Stringham E G; Dixon D K; Jones D; Candido E P

CS Department of Biochemistry, University of British Columbia, Vancouver, Canada.

SO Molecular biology of the cell, (1992 Feb) 3 (2) 221-33.  
Journal code: 9201390. ISSN: 1059-1524.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199204

ED Entered STN: 19920509  
Last Updated on STN: 19920509  
Entered Medline: 19920427

AB The expression of the hsp16 gene family in *Caenorhabditis elegans* has been examined by introducing hsp16-lacZ fusions into the **nematode** by **transformation**. Transcription of the hsp16-lacZ **transgenes** was totally heat-shock dependent and resulted in the rapid synthesis of detectable levels of beta-galactosidase. Although the two hsp16 gene pairs of *C. elegans* are highly similar within both their coding and noncoding sequences, quantitative and qualitative differences in the spatial pattern of expression between gene pairs were observed. The hsp16-48 promoter was shown to direct greater expression of beta-galactosidase in muscle and hypodermis, whereas the hsp16-41 promoter was more efficient in intestine and pharyngeal tissue. **Transgenes** that eliminated one promoter from a gene pair were expressed at reduced levels, particularly in postembryonic stages, suggesting that the heat shock elements in the intergenic region of an hsp16 gene pair may act cooperatively to achieve high levels of expression of both genes. Although the hsp16 gene pairs are never constitutively expressed, their heat inducibility is developmentally restricted; they are not heat inducible during gametogenesis or early embryogenesis. The hsp16 genes represent the first fully inducible system in *C. elegans* to be characterized in detail at the molecular level, and the promoters of these genes should find wide applicability in studies of tissue- and developmentally regulated genes in this experimental organism.

L6 ANSWER 45 OF 45 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1989:626561 CAPLUS

DN 111:226561

TI Proper expression of myosin genes in **transgenic** nematodes

AU Fire, Andrew; Waterston, Robert H.

CS Lab. Mol. Biol., Medical Res. Counc., Cambridge, CB2 2QH, UK

SO EMBO Journal (1989), 8(11), 3419-28  
CODEN: EMJODG; ISSN: 0261-4189

DT Journal

LA English

AB *Caenorhabditis elegans* has four genes which encode skeletal myosin heavy chain isoforms. The authors introduced clones of two of these genes, myo-3 and unc-54 at low copy number into the germline of *C. elegans*. The resulting loci behave as functional copies of the genes by two genetic criteria: (i) they can result in phenotypic rescue of strains carrying inactivating myo-3 or unc-54 mutations, and (ii) their presence in strains with wild-type copies of the endogenous myosin loci has genetic consequences similar to duplicating the endogenous loci. The re-introduced genes function at a level close to that of the endogenous loci. Monoclonal antibodies specific for the different isoforms have been used to localize the expressed proteins. The re-introduced genes express in precisely the same cell types as the endogenous genes, and the myosin products produced assemble into filament structures as in wild-type. Very high copy nos. of the unc-54 gene lead to a disruption of muscle structure which may result from overexpression of the protein product.

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